

Case History

- The Patient is a 69-year-old male who five days prior to his presentation to the hospital developed symptoms of left side cramping pain in his left buttock radiating down his leg.
- Initially he attributed it to sitting at his desk for long periods of time but in the days following noticed unsteadiness while walking and weakness in his hips and thighs, later developing paresthesias.
- He presented to the hospital after a recommendation from a friend who is a local physician.
- He was tested for COVID-19 after admitting remote history of mild upper respiratory symptoms a few weeks ago.
- Clinically his exam was consistent with acute inflammatory demyelinating polyneuropathy, but he initially refused a lumbar puncture.
- He underwent interventional guided central line placement and was started on plasma exchange therapy.
- There was thought to be a slight increased risk with hypercoagulability with COVID-19 and intravenous Immunoglobulin therapy.
- Later in his course he ultimately agreed to a lumbar puncture which was significant for cytoalbuminologic dissociation.

Discussion

- Individuals with GBS present with a typical axonal and demyelinating disease resulting in progressive weakness of limbs with concomitant loss of tendon reflexes.
- Typically, it follows a viral infection, and historically has been seen in SARS and MERS.
- The mechanism of GBS is thought to be based on molecular mimicry and thus considered to affect genetically predisposed patients.

Conclusion

- COVID-19 appears to cause neurologic symptoms such as GBS with traditional therapies such as intravenous immunoglobulin therapy being considered high risk due to hypercoagulable nature of the disease indicating the need for careful consideration of infection in those with neurologic complaints as well as further studies in the treatment of these symptoms in those infected.
- Studies are currently ongoing in relation to COVID-19 and long-term neurologic effects

Hospital Course

- Patient stated, upon questioning, that he developed a fever in March and had some upper respiratory tract symptoms but never had a cough.
- However, his niece did later test positive for COVID-19.
- He underwent interventional Radiology guided central line placement and started on plasma exchange therapy for five days.
- Decision was made to treat with plasma exchange rather than IV immune globulin secondary to an increased risk of hypercoagulability with his COVID-19 infection.
- After completing his course, he continued to be weak in his lower extremities.
- He was discharged with a rolling walker and bilateral ankle foot orthotics.

References

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2. Zhao, Hua, et al. "Guillain-Barré syndrome associated with SARS-CoV-2 infection: causality or coincidence?." *The Lancet Neurology* 19.5 (2020): 383-384.
3. Toscano, Gianpaolo, et al. "Guillain-Barré syndrome associated with SARS-CoV-2." *New England Journal of Medicine* 382.26 (2020): 2574-2576.

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